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Applicants' claimed invention is directed to a semiconductor package including a chip having an active surface and a non-active surface, and formed with a plurality of bond pads on the active surface; a conductive bump formed on each of the bond pads; a carrier having a cavity for receiving the chip; a first dielectric layer applied over the active surface of the chip and the carrier, and which fills the cavity and encapsulates the conductive bumps; and a plurality of first conductive traces formed on the first dielectric layer and electrically connected to exposed ends of the conductive bumps (see claim 1).

Referring to FIG. 1 of the application, a carrier 22 has a cavity 220 for receiving a chip 20, and a first dielectric layer 23 is applied over an active surface 201 of the chip 20 such that the first dielectric layer 23 fills in the cavity 220.

Claims 1 and 6-8 were rejected under 35 USC 102(b) as being anticipated by U.S. Patent 5,578,869 to Hoffman et al. ("Hoffman"). This rejection is respectfully traversed.

Hoffman does not teach or suggest a semiconductor package including a first dielectric layer applied over the active surface of a chip and a carrier, where the first dielectric layer fills a cavity of the carrier (see claim 1). Also, there is no teaching or suggestion of a "a plurality of first conductive traces formed on the first dielectric layer," as recited in claim 1.

On page 3, lines 1-2 of the Office Action of 03/15/2006, a polymer adhesive 54 in Hoffman was cited as allegedly corresponding to the Applicants' claimed "first dielectric layer."

As described in column 5, lines 65-67 of Hoffman, second solder bumps 36 serve to electrically interconnect circuit traces 26 and 50, respectively, as shown in FIG. 3 of Hoffman. However, to provide greater adhesion of a cover component 20 to a base component 42 in Hoffman, a polymer adhesive 54 is used (see column 5, line 67 to column 6, line 3). The polymer adhesive 54 is "any suitable material that bonds to both the non-conductive layers 24, 44 and to the conductive circuit traces 26, 50" (column 6, lines 3-5).

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As disclosed in Hoffman, reference number 54 corresponds to a polymer adhesive, and does not provide the structure or function of Applicants' claimed "first dielectric layer." One of ordinary skill in the art would not consider the polymer adhesive 54 of Hoffman as somehow corresponding to a "dielectric layer."

For example, in the Applicants' invention, the first dielectric layer 23 can be formed by a conventional disposition technique, such as spin coating (see, e.g., specification at page 7, second paragraph). However, one of ordinary skill in the art would not substitute a polymer adhesive for the claimed dielectric layer.

Even if the polymer adhesive 54 is somehow considered a "first dielectric layer," Hoffman does not teach or suggest that the polymer adhesive 54 fills into a receiving portion 46 (cited in the Office Action as allegedly corresponding to the claimed "cavity").

Claim 1 specifically requires that the first dielectric layer "fills in the cavity." However, in Hoffman, the polymer adhesive 54 is merely formed on one side of the circuit traces 26 and solder bumps 36 (see FIG. 3 of Hoffman).

Hoffman also does not teach or suggest first conductive traces formed on the first dielectric layer. In Hoffman, the polymer adhesive 54 is formed on only one side of the circuit traces 26.

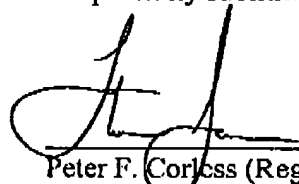
Moreover, the package disclosed in Hoffman is a ball grid array (BGA) semiconductor package, as distinguished from the Applicants' claimed invention, which is directed to a stacked chip scale package (CSP). As a result, it would not make sense to somehow modify the package of Hoffman to somehow include the missing elements described above.

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For at least the reasons discussed above, the Hoffman reference does not anticipate or otherwise render obvious the Applicants' claimed invention. Therefore, independent claim 1 and dependent claims 6-8 are patentable over Hoffman.

It is believed the application is in condition for immediate allowance, which action is earnestly solicited.

Respectfully submitted,

  
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